DOCUMENT RESUME

ED 247 653 EA 017 033

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TITLE Some Preliminary Evaluation Notes of an Effective Schools Effort: Project SHAL.
PUB DATE Nov 83
NOTE 35p.; Paper presented at the Annual Meeting of the Southern Regional Council on Educational Administration (Knoxville, TN, November 13-15, 1983).
PUB TYPE Speeches/Conference Papers (150) -- Reports - Evaluative/Feasibility (142) -- Statistical Data (110)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Academic Achievement; Comparative Analysis; *Comparative Testing; *Educational Change; *Educational Improvement; Elementary Education; Inservice Teacher Education; Junior High Schools; Minority Group Children; Program Evaluation; Quantitative Tests; Reading Tests; School Effectiveness; Scores; *Standardized Tests; Statistical Analysis; Tables (Data); Test Norms; Urban Education
IDENTIFIERS California Achievement Tests; *Project SHAL; *Saint Louis City School District MO

ABSTRACT

Pupils at three elementary schools and one junior high school among Area 1 inner-city schools of St. Louis Missouri, were identified as scoring well below norms on standardized tests. An effort to change the educational programs at these schools netted financial support and the creation of Project SHAL (named for the schools involved). Inservice programs for teachers, parents, and others concentrated on the major elements of effective schools (building leadership, high expectations, focus on basic skills, a school climate conducive to learning, and frequent monitoring of pupil progress). In four testing administrations, scores from the California Achievement Tests are compared for Area 1 schools, city schools, and SHAL schools. Students at SHAL schools showed impressive gains in mathematics and good gains in reading when percentages of pupils in various quartiles were compared over time from fall 1980 until spring 1982. Nine tables illustrate the comparisons. (MLF)

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SOME PRELIMINARY EVALUATION NOTES OF AN EFFECTIVE SCHOOLS EFFORT: PROJECT SHAL

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NOVEMBER 1983

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SOME PRELIMINARY EVALUATION NOTES OF AN EFFECTIVE SCHOOLS EFFORT: PROJECT SHAL*

Schools served by the Area I district office in St. Louis, MO were typical of inner-city schools in 1979. Each of us knows well the kinds of descriptors applied to these schools. The pupils were performing well below norm on standardized tests. The schools were nearly 100% minority, and there was little possibility of meaningful desegregation due to geographic and demographic factors. The buildings were old and the buildings and grounds needed work. There was little respect for the schools and little parental involvement with the schools. Attendance was poor. Vandalism was high. Teachers had little enthusiasm for their work and often held low expectations for pupil achievement.

Persons in the Area I office recognized that some action was necessary. They picked up on the notion of "effective schools" as discussed by Edmonds, Brookover, and others. They developed a proposal to the Danforth Foundation to provide some financial support to change educational programs in Area I. They identified three elementary schools and one junior high school that compromised a "cluster" and project SHAL (named for the schools in the project: Stowe, Hempstead, Arlington, and LaClede) soon was more than an idea.

There was strong central office support through the Area I office for the idea. A structure to support the change was established including committees and processes for implementing the change. A program of public information and a planned program of inservice training were implemented. Some preliminary or baseline data were collected for the project schools.

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Thanks to staff in St. Louis for assistance and access to data, and to staff of the Midwest Center, KSU, Manhattan, KS for analysis assistance. This report draws from some prior materials listed in Bibliography, p. 25.

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Project SHAL became operational in September, 1981, in the sense that teachers began using the ideas and plans that had been established in the inservice program. However, because of the planning and flow of information about the project, establishment of the project structure, and the fact that the city system changed from the ITBS to the CAT as the district testing program in 1980, the fall, 1980 test data were selected as baseline for Project SHAL.

Inservice programming focused on teachers, parents, and others connected with the schools. There was attention to the major five elements of effective schools (building leadership, high expectations, focus on basic skills, a school climate conducive to learning, and frequent monitoring of pupil progress.) Inservice efforts followed the format of such things as Teacher Expectation and Student Achievement (TESA) and Expectations, Interactions, Achievement, (EIA). Throughout the year coordinators of instruction from the Area I office worked in the buildings with teachers to help see that planned activities were being implemented in the classroom. A general timeline for Project SHAL is as follows:

11/80-9/81 - "Readiness" (This included such things as establishing councils and task forces, visits to other exemplary schools and orientation activities.)

2/80 - Initiation of community meetings and orientation

9/81 - Implementation of SHAL activities in classrooms (four schools)

9/81-8/83 - Second year of operation (four original schools) and 12 new schools in their first year of activity

9/83-8/84 - Third year of SHAL activities (the first 4 schools will be in their third year; the next 12 in their second year; and additional schools have been added.

A decision was made to use results of the district testing program (CAT) as the primary procedure for evaluation of project SHAL. Special testings were

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avoided, although comparisons were made when state and other tests were used. This decision was made primarily based upon 2 factors: (1) the economics of testing in terms of both money and time, and (2) one SHAL goal dealt with pupil achievement relative to national and city norms.

According to the proposal presented to the Danforth Foundation, there were two basic SHAL goals. The first goal was to work with youngsters so that they would eventually attain and maintain grade level as compared to national norms. The second goal was to develop a plan or model to track the implementation of SHAL. This model would assist in the implementation of SHAL elements in additional schools.

Starting from this relatively uncomplicated base, Project SHAL has become a focus of interest in the St. Louis system. Admittedly there has been additional financial support for Project SHAL, but this has been relatively modest. The most important financial effort has supported teacher inservice training. As might be expected, there has been some success with Project SHAL, and there also have been areas where Project SHAL has not yet met expectations.

Because of the availability of data and some reporting problems, early assessments of SHAL used "gross" data and such things as averag· data for grade levels. Starting in 1983 some "cohort" data were available and individual tracking of pupils became possible. Thus, we anticipate that future evaluation reports will be more revealing than earlier ones. This report, however, draws heavily on data from 1980-82, and a small amount available through 8/83.

Because of the relative short time of pupil contact with Project SHAL, this report relies on limited data collection points; namely, the Fall, 1980 and 1981, and Spring, 1981 and 1982. Additional data have been collected and are currently being processed. Additional pilot analyses are being made using

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matched data* for youngsters who have been in the SHAL schools. Much of the current evaluation information is based on aggregate data (that is, average school or area data and not individual scores). This paper mostly contains gross measures of progress or achievement.**

An Interim Evaluation Report (Achilles and DuVall) was the first compiled summation of Project SHAL evaluation efforts. The remainder of this report consists of an analysis of test scores by quartile, some initial statistical analyses of CAT scores, some recent matched data analyses, and discussion of results.***[The following is taken verbatim or with little modification from the Interim Evaluation Report, Achilles and DuVall, as revised in 1/83, pages 3-14.]

The SHAL goal of each youngster in SHAL schools attaining and maintaining the national average is admirable, but should be approached with care. Perhaps, in hindsight, this goal should have read, "Youngsters who remain in SHAL will attain and maintain the national norm on the standardized measure being used." Clearly, with the mobility of youngsters, test results for SHAL schools will be contaminated with data of students attending a SHAL school but who have not received extended

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* Matched data mean that an individual pupil can be compared on two or more test scores over time. Aggregate data are averages of all pupils who took a test at a particular time. Matched data are preferable for SHAL evaluation purposes.

** Some measures are only estimates (hopefully conservative). Some quartile data reported are averages of averages for SHAL schools. The elementary schools averaged 79, 55 and 67 per grade (Spring, 1982). The school tending toward best results (N=67) is "balanced" by the others (79-55). More exact analyses are being planned.

*** Care must be exercised in generalizing much from these initial results. Additional indicators, however, are available (e.g., observations, interviews with teachers and administrators, parental involvement). "Good things" appear to be happening in SHAL schools.

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periods of treatment in the SHAL program. They may have moved to a SHAL school late in a school year, received little benefit of SHAL, and then been tested. Their tests will be in the aggregate data. At the other extreme, a pupil in SHAL for some time may have moved to a non-SHAL school late in the year. This pupil's scores will be in the aggregate data of a school against which we are comparing SHAL to determine SHAL growth. (As matched data become available, these problems are reduced). Following the presentation of data by quartiles are statistical presentations developed by Dr. James Leonard of the Mid-West Race and Sex Desegregation Center, Kansas State University.

Quartile Data

Using the fall, 1980 test information as baseline, and using only the California Achievement Test (CAT) Total Reading (TR) and Total Mathematic (TM) scores, some comparison and tracking of pupil progress are possible. Tables 1, 2, 3, and 4 present data on the percent of pupils by grade level by quartile on TR and TM portions of the CAT. Table 1 shows the scores by the SHAL schools for reading and Table 3 shows the same information for the Area I and city (SHAL Schools included); Table 2 shows the SHAL scores in mathematics and Table 4 shows comparable information for Area I and the city.

These data identify that the SHAL schools had large percentages of their pupils in the lowest quartile, and small percentages of their pupils in the highest quartiles in mathematics and reading, and that the SHAL schools were generally lower than Area I schools and the city schools. (In some cases over 50 percent of SHAL pupils were in the lowest quartile.) Thus, starting from a relatively low situation, the SHAL schools had room for improvement.

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TABLE 1. Student CAT Reading Score Percentages by Quartile in SHAL Schools

School	Sp.82 Gr.	(N)	Quartile 1 F'80	Sp'81	F'81	Sp'82	Quartile 2 F'80	Sp'81	F'81	Sp'82	Quartile 3 F'80	Sp'81	F'81	Sp'82	Quartile 4 F'80	Sp'81	F'81	Sp'82
Hempstead	1	74	52.2	26.2	31.0	20.2	22.2	35.0	31.0	24.6	18.9	22.3	26.8	28.9	6.7	16.5	11.3	20.0
	2	80	36.4	24.6	55.6	45.3	34.8	42.0	22.2	26.6	19.7	26.1	18.9	20.0	9.1	7.2	3.3	8.0
	3	62	23.7	27.8	41.2	27.5	44.7	38.0	44.1	53.4	26.3	22.8	10.3	12.0	5.3	11.4	4.4	6.8
Ave.-79	4	75	44.4	41.0	44.6	36.1	42.2	34.0	42.2	40.2	10.0	19.0	10.8	19.4	3.3	6.0	2.4	4.1
	5	105	36.6	27.5	37.4	25.0	39.7	22.5	42.3	49.0	18.3	31.9	14.4	19.2	5.3	18.1	5.4	6.7
Act.	Ave.					30.7				38.9				20.1				10.1
Arlington	1	53	52.9	29.9	42.1	31.3	32.5	23.9	38.6	19.6	22.1	40.3	14.0	23.5	1.5	6.0	5.3	25.4
	2	52	56.0	38.6	56.4	56.7	26.0	43.2	34.5	21.6	16.0	13.6	7.3	18.9	2.0	4.5	1.8	2.7
	3	56	51.1	54.9	54.0	53.5	38.3	33.3	34.0	35.7	8.5	7.8	12.0	10.7	2.1	3.9	0	10.0
Ave.-55	4	56	59.7	45.8	46.3	37.5	23.4	27.8	35.2	37.5	11.6	20.8	13.0	21.4	5.2	5.6	5.6	3.5
	5	58	50.0	27.0	38.7	25.8	35.0	51.4	33.9	48.2	12.5	16.2	24.2	17.2	2.5	5.4	3.2	8.6
Act.	Ave.					40.7				32.9				18.3				10.0
Laclede	1	50	50.0	11.7	27.5	17.7	16.7	26.2	45.1	37.7	21.6	49.5	23.5	37.7	11.8	12.6	3.9	6.6
	2	77	34.2	23.8	38.6	14.6	37.0	47.6	50.6	53.3	21.9	21.4	10.8	30.6	6.8	7.1	0	1.3
Ave.-67	3	66	36.7	25.8	20.3	13.6	21.7	35.5	24.6	25.7	35.0	22.6	47.8	37.8	6.7	16.1	7.2	22.7
	4	80	57.1	38.9	41.4	30.6	34.3	41.7	34.1	32.0	7.1	15.3	18.4	33.3	1.4	4.2	1.1	4.0
	5	65	47.5	26.7	34.3	23.0	42.6	46.7	43.3	40.0	4.9	10.0	16.4	23.0	4.9	6.7	6.0	13.8
Act.	Ave.					20.3				37.0				23.7				9.8
Stowe	6	105	49.1	35.9	37.4	24.0	34.8	34.0	45.2	47.1	10.6	23.1	13.0	22.1	5.6	7.1	4.3	5.7
	7	132	34.8	32.6	33.8	30.3	48.1	38.4	42.1	44.6	14.1	23.2	15.0	15.9	3.0	5.8	9.0	9.0
Ave.-120	8	120	43.5	35.3	33.3	18.8	32.7	34.5	41.7	57.2	19.7	23.7	20.5	19.6	4.1	6.5	4.5	4.2
Act.	Ave.					24.6				49.6				19.0				6.7
Average	6-8		42.5	34.6	34.8	24.4	38.5	35.6	43.0	49.6	14.8	23.3	16.2	19.2	4.2	6.5	5.9	6.6
Average	(Ave)		45.3	32.4	39.7	29.5	33.2	36.4	38.0	38.6	16.6	22.8	17.6	22.8	4.9	8.4	4.4	9.5
Act.	Ave.					28.5				40.2				22.4				9.0
Average	1-5					30.6				36.3				23.6				10.0
Act.	Ave.					29.9				37.0				23.7				9.8

TABLE 2. Student CAT Math Score Percentages by Quartile in SHAL Schools

School	Grade	Quartile 1				Quartile 2				Quartile 3				Quartile 4			
		F'80	Sp'81	F'81	Sp'82	F'80	Sp'81	F'81	Sp'82	F'80	Sp'81	F'81	Sp'82	F'80	Sp'81	F'81	Sp'82
Hempstead	1	44.7	15.0	21.3	13.6	22.3	24.3	28.0	9.5	19.1	34.6	30.7	43.8	13.8	26.2	20.0	32.8
	2	40.3	27.1	41.9	21.9	33.8	31.4	32.6	27.3	18.2	27.1	18.6	38.3	7.8	14.3	7.0	12.3
	3	25.3	15.2	35.3	14.0	40.0	21.5	41.2	31.5	29.5	41.8	19.1	43.8	5.3	21.5	4.4	10.5
Ave.- 79	4	45.4	29.6	42.2	23.9	40.2	46.9	28.9	35.2	14.4	18.4	24.1	26.7	0	5.1	4.8	14.0
	5	28.5	15.2	36.0	18.0	28.5	38.4	38.7	35.2	30.0	32.6	20.7	32.3	13.1	13.8	4.5	14.2
Arlington	1	57.4	22.7	41.4	33.9	24.9	39.4	34.5	15.0	10.3	25.8	20.7	13.2	2.9	12.1	3.4	37.7
	2	47.2	32.7	58.6	35.8	22.6	28.8	24.1	20.7	22.6	30.8	13.8	30.1	7.5	7.7	3.4	13.2
	3	38.3	29.4	44.7	25.4	36.2	41.2	34.0	37.2	17.0	23.5	19.1	35.2	8.5	5.9	2.1	1.9
Ave.- 55	4	51.9	37.5	35.2	30.9	23.4	23.6	31.5	36.3	18.2	25.0	22.2	23.6	6.5	13.9	11.1	9.0
	5	60.0	21.6	35.5	17.2	32.5	45.9	21.0	37.9	5.0	24.3	27.4	32.7	2.5	8.1	16.1	12.0
Laclede	1	54.7	7.7	59.6	20.8	18.9	24.0	15.8	29.1	8.4	32.7	14.0	25.0	17.9	35.6	10.5	25.0
	2	28.8	15.7	36.8	6.3	40.0	27.7	33.3	25.3	16.3	39.8	20.7	58.2	15.0	16.9	9.2	10.1
	3	10.4	8.1	13.2	6.2	33.3	25.8	32.4	21.8	22.8	25.8	30.9	20.3	33.3	40.3	23.5	51.5
Ave.- 67	4	43.3	23.5	34.1	15.3	35.8	33.8	34.1	42.3	17.8	32.4	23.1	20.5	3.0	10.3	8.8	21.7
	5	43.3	21.7	11.9	1.5	25.0	28.3	38.8	21.5	16.7	16.7	32.8	43.0	15.0	33.3	16.4	33.8
Stowe	6	43.5	29.9	22.4	7.0	34.8	44.6	40.5	46.4	18.0	23.6	22.4	29.2	3.7	1.9	14.7	17.1
	7	40.9	18.0	35.9	7.7	34.3	28.6	45.0	24.0	21.2	36.8	18.3	48.8	3.6	16.5	.8	19.3
Ave.-120	8	41.8	23.0	22.1	10.2	34.9	43.2	44.3	35.0	19.9	28.8	29.0	43.5	3.4	5.0	4.6	10.2
Average		41.4	21.9	34.9	17.2	31.2	33.2	33.3	29.5	18.1	28.9	45.3	33.8	9.0	16.0	9.2	19.2

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TABLE 3. Student CAT Reading Score Percentages by Quartile in Area I and the City

School	Grade	Quartile 1				Quartile 2				Quartile 3				Quartile 4			
		F'80	Sp'81	F'81	Sp'82	F'80	Sp'81	F'81	Sp'82	F'80	Sp'81	F'81	Sp'82	F'80	Sp'81	F'81	Sp'82
Area 1	1	38.3	31.3	40.3	31.8	28.6	26.9	34.0	27.8	19.9	28.6	17.8	27.7	13.3	13.2	11.5	12.7
	2	49.0	31.5	52.0	35.2	31.0	37.8	28.8	36.2	15.4	21.9	15.0	20.4	4.5	8.8	4.1	8.2
	3	48.6	41.1	43.0	37.4	33.0	34.4	35.3	36.3	14.4	16.5	16.9	17.5	4.0	8.0	4.8	8.8
	4	44.8	31.0	44.7	29.2	34.9	36.5	33.7	36.0	14.1	23.2	15.7	25.5	6.3	9.3	5.9	9.3
	5	40.0	26.0	34.7	22.7	35.1	38.5	37.1	39.5	17.1	22.5	19.4	23.9	7.8	13.0	8.8	13.9
	6	40.3	28.0	35.4	24.5	35.1	37.5	37.5	40.4	16.1	22.9	18.7	24.2	8.4	11.9	8.3	10.9
	7	33.9	27.9	31.7	26.9	37.4	35.3	36.6	34.7	18.7	24.7	20.0	24.6	10.0	12.0	11.7	13.7
	8	33.7	24.3	34.3	22.9	32.3	34.4	32.1	36.8	23.2	27.3	22.9	27.1	10.8	14.0	10.8	13.3
Average		41.1	30.0	39.5	28.8	33.4	35.2	34.4	36.0	17.4	23.5	18.3	23.9	8.1	11.3	8.2	11.4
City	1	42.1	30.5	40.8	34.3	27.7	29.7	33.6	26.9	18.7	28.6	15.6	26.2	11.4	11.1	10.0	12.6
	2	50.1	31.0	54.1	39.0	30.4	38.2	29.4	34.9	14.8	21.3	13.3	19.3	4.7	8.6	3.3	6.8
	3	48.0	41.1	40.1	36.9	37.8	34.7	37.2	38.2	15.3	17.7	19.0	17.5	3.9	6.5	3.7	7.5
	4	45.0	30.3	43.4	29.1	35.1	38.0	36.4	38.4	14.1	23.7	15.9	25.7	5.7	8.1	4.3	6.8
	5	42.0	26.2	36.1	22.3	37.5	41.8	39.6	43.7	15.4	21.2	19.2	23.5	5.1	10.7	5.1	10.5
	6	40.4	28.6	35.0	24.8	37.2	39.2	41.9	43.3	16.2	22.9	18.0	24.2	6.2	9.3	5.1	7.6
	7	35.9	28.5	32.8	28.0	40.1	39.7	39.3	39.0	17.2	23.3	19.6	22.7	6.8	8.5	8.3	10.4
	8	38.2	29.5	37.2	21.6	33.1	35.8	35.3	42.5	22.1	25.8	20.9	27.0	6.6	8.8	6.6	8.8
Average		42.7	30.8	39.9	29.5	34.2	37.1	36.6	38.4	16.7	23.1	17.7	23.3	6.3	9.0	5.8	8.9

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TABLE 4. Student CAT Math Score Percentages by Quartile in Area I and the City

		Quartile 1				Quartile 2				Quartile 3				Quartile 4			
School	Grade	F'80	Sp'81	F'81	Sp'82	F'80	Sp'81	F'81	Sp'82	F'80	Sp'81	F'81	Sp'82	F'80	Sp'81	F'81	Sp'82
Area 1	1	40.2	25.1	43.1	27.5	26.9	24.9	27.0	21.2	17.8	29.5	18.5	27.8	15.1	20.5	11.5	23.4
	2	41.0	28.9	45.4	27.3	30.4	31.1	27.8	30.9	21.6	28.2	17.7	29.4	7.0	11.8	9.1	12.5
	3	37.6	26.5	31.5	22.1	36.1	29.1	37.2	31.8	18.2	29.4	23.0	32.8	8.1	15.1	8.3	13.2
	4	38.1	23.2	33.7	20.6	33.5	36.6	35.5	39.0	21.0	26.7	23.7	25.7	7.4	13.5	7.0	14.8
	5	33.8	20.2	29.6	17.9	33.0	31.6	36.1	30.6	24.3	29.6	25.5	33.1	8.9	18.6	8.9	18.5
	6	35.1	23.8	27.2	18.8	39.6	40.3	39.7	39.2	18.9	26.1	24.8	31.0	6.4	9.8	8.4	11.0
	7	34.9	21.3	33.9	19.5	34.6	37.2	41.9	35.3	25.1	31.1	20.4	32.8	5.4	10.4	3.5	12.4
	8	31.7	19.9	28.2	14.5	39.1	36.3	44.2	38.5	24.3	33.7	23.7	37.6	4.9	10.1	4.0	9.5
Average		36.5	23.6	34.1	21.0	34.2	33.4	36.1	33.3	21.4	29.3	22.2	31.3	7.9	13.8	7.6	14.4
City	1	41.4	27.3	42.4	27.3	24.9	23.5	25.4	23.1	19.5	29.0	17.9	28.5	14.2	20.2	14.3	21.2
	2	42.9	27.0	42.6	25.7	30.1	29.5	28.9	30.7	19.6	29.9	19.6	30.1	7.4	13.6	9.0	13.5
	3	38.7	27.0	34.7	23.4	34.9	30.1	35.5	31.4	18.9	27.3	21.3	30.2	7.5	15.6	8.5	15.0
	4	40.4	24.7	35.4	20.7	32.9	35.0	35.1	37.4	19.1	25.6	22.2	26.6	7.6	14.7	7.3	15.3
	5	34.9	20.6	30.0	16.9	32.4	31.8	32.6	30.0	22.0	29.2	25.3	33.0	10.7	18.4	12.2	20.1
	6	36.2	23.3	29.2	19.1	35.3	37.5	37.1	37.6	20.2	25.8	23.2	28.3	8.4	13.4	10.5	15.0
	7	35.0	21.5	33.1	17.7	33.6	34.9	36.7	35.3	24.2	30.6	22.8	32.3	7.7	12.9	7.5	14.7
	8	28.2	16.8	28.2	14.7	39.0	33.6	40.5	36.1	24.9	36.0	24.3	37.0	8.0	13.5	7.0	12.2
Average		37.2	23.5	34.5	20.7	32.9	32.0	34.0	32.7	21.1	29.2	22.1	30.8	8.9	15.3	9.5	15.9

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Quartile data are provided from four testing administrations: 1980-81 and 1981-82. Fall test data (10/80 and 10/81) are from the population taking the tests at that time. Spring (5/81 and 5/82) data are "matched" as pre-post tests by matching individual students' Spring scores with their scores from the preceding Fall. Thus, pre/post comparisons for a given year show gains for those who actually remained in school for two testings. The Fall results are from a larger group and the data are not strictly comparable. The most comparable comparisons are Fall to Fall data and Spring to Spring data.

Table 1 shows the distribution of pupils in quartiles as a percent of each grade for CAT TR scores by schools in SHAL. Table 2 shows the same data for TM. Tables 3 and 4 show the same data for AREA I and City. Quartile 4 is "high" and quartile 1 is "low." "Positive" gains are for pupils to move from a lower to a higher quartile. Therefore, we hope to see the percent of pupils in the lowest quartile (1) reduce and the percent of pupils in the highest quartile (4) increase over time.

Discussion

Lower percents of pupils in lower quartiles and higher percents of pupils in higher quartiles constitute shifts in the "right" direction. With five grades (1-5) in each of three elementary schools and three grades (6-8) in Stowe, and with possible shifts in 4 quartiles there are 18 grades per quartile (4) or 72

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possible "right" shifts for SHAL schools. There are 8 grades and 4 quartiles for city and area, or 32 comparisons each. SHAL gains are generally positive, but gains in the city and area also are. The percent of gains favor SHAL in only half of the comparisons.

	Reading						Math					
	SHAL (of 72)		City (of 32)		Area (of 32)		SHAL (of 72)		City (of 32)		Area (of 32)	
	N	%	N	%	N	%	N	%	N	%	N	%
"Right"	53	74	23	72	26	81	63	88	29	91	28	88
"Wrong"	17	24	9	28	6	19	8	11	2	6	4	12
Even	2	2	0	0	0	0	1	1	1	3	0	0

In terms of magnitude of shifts, the average percents of youngsters in the quartiles give some basis for comparison. The SHAL schools generally started with a greater percent of youngsters in the lowest quartile than did both the City and Area I and ended up (Spring, 1982) with a greater percent of youngsters in the highest quartile than did the City and Area I. Although the shift from lowest to highest is important, the shift in the middle two quartiles is also important. Table 5 presents comparisons of shifts in the quartiles (Note that some SHAL comparison use averages of averages; see earlier note, p. 4.)

MATH. Table 5 shows that the four SHAL schools started (Fall, 1980) with 41.4 percent of their students in the lowest quartile compared to the city's 37.2 and 36.5 for Area I. By Spring, 1982 the numbers were 17.2, 20.7 and 21.0 respectively. SHAL pupils gained 24.2 percent; City gained 16.5 and Area I gained 15.5. SHAL schools started with a higher percent of pupils in quartile 1 than did either the City or Area I and ended with a lower percent of pupils in that quartile than both the City and Area I. In contrast, SHAL started with a lower percent of pupils in both higher quartiles (3 and 4) than did the City

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TABLE 5. Percent of Pupils in Quartiles (F'80 and Sp'82) for SHAL, City, and Area I and Gain

	Quartile 1				Quartile 2				Quartile 3				Quartile 4			
Grades 1-8	F'80	Sp'81	F'81	Sp'82	F'80	Sp'81	F'81	Sp'82	F'80	Sp'81	F'81	Sp'82	F'80	Sp'81	F'81	Sp'82
Reading																
SHAL	45.3			29.5	33.2			38.6	16.6			22.8	4.9			9.5
City	41.1			28.8	33.4			36.0	17.4			23.9	8.1			11.4
Area	42.7			29.5	34.2			38.4	15.7			23.3	6.3			8.9
Gain F'80-Sp'82																
SHAL				-15.8				5.4				6.2				4.6
City				-12.3				2.6				6.5				3.3
Area				-13.2				4.2				[illegible]				2.6
Math																
SHAL	41.4			17.2	31.2			29.5	18.1			33.8	9.0			19.2
City	37.2			20.7	32.9			32.7	21.1			30.8	8.9			15.9
Area	36.5			21.0	34.2			33.3	21.4			31.3	7.9			14.4
Gain F'80-Sp'82																
SHAL				-24.2				-1.7				15.7				10.2
City				-16.5				[illegible]				9.9				7.0
Area				-15.5				[illegible]				9.9				6.5

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and Area I and ended with a higher percent of pupils in both quartiles 3 and 4 than did both the City and Area I. Most impressive are SHAL gains in quartiles 1, 3 and 4 when compared to the City and Area I. Since both the City and Area I were moving in a positive direction, this shows that SHAL schools--which started further behind--caught up and surpassed the City and Area I schools. (The gain is a conservative figure since SHAL pupils are also counted in the City and Area I data.)

READING. The gains in reading, although good, are not as impressive as the gains in math. (Data in the next section support this finding.) SHAL schools started (Fall, 1980) with a higher percent of youngsters in the lowest quartile (45.3) than did the City (41.1) and Area I (42.7) and ended up with a greater percent of youngsters in the highest quartile (9.5) than did Area I (8.9), although not as great as the City (11.4). However, the gain by SHAL schools (4.6) in the highest quartile was greater than City (3.3) or Area I (2.6). Although the greatest gains for SHAL schools relative to City and Area I in math were in decreasing the percent of pupils in the lowest quartile and increasing the percent of pupils in the third quartile, the greatest gains in reading relative to City and Area I were in increasing the percent of pupils in the second and fourth quartiles.

Summary

SHAL schools show impressive gains in math and good gains in reading when percents of pupils in various quartiles are compared over time from Fall, 1980 (baseline) until Spring, 1982 (and of the first full year of pupil exposure to SHAL). In terms of gains in the "right" direction, SHAL was favored in 4 of 4 in math and 2 of 4 in reading (with one even and one where either the City or Area I was favored.) Six of eight (with one even) is a positive start for SHAL.

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Figures 1 and 2 below summarize the gains in the percents of youngsters in the quartiles for SHAL schools, for Area I and for the City. "Gains" are increases in the percents of pupils in quartiles 3 and 4 in math (quartiles 2, 3, and 4 in reading) and reductions in the percents of pupils in quartiles 1 and 2 (math) and quartile 1 (reading).

Figure 1. Percent Gain in percent of Pupils in quartiles in Math. (A gain in quartiles 1 and 2 is a decrease; in 3 and 4 a gain is an increase.)

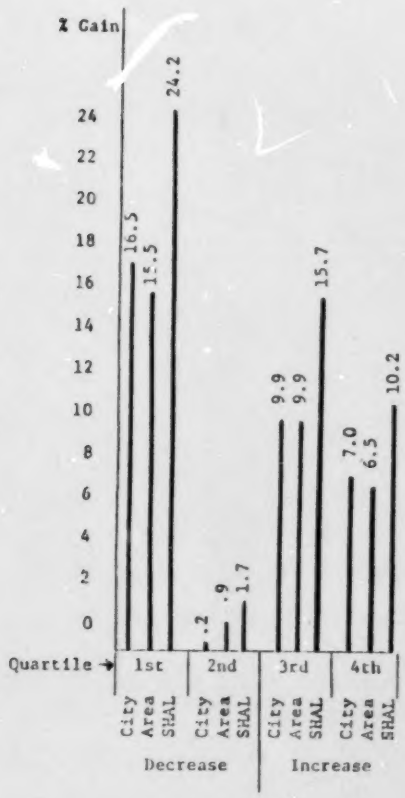
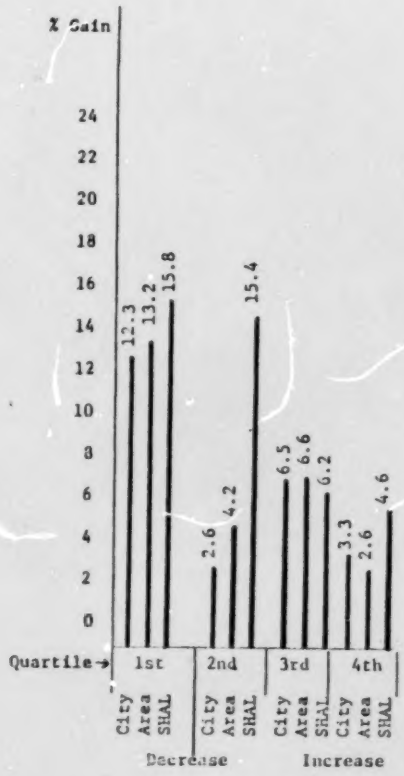


Figure 2. Percent Gain in Percent of Pupils in Quartile in Reading. (A gain in Quartile 1 is a decrease; in 2, 3, and 4 a gain is an increase.)



(Achilles, Duvall p. 14)

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Statistical Data* The next 7 pages are verbatim from Achilles and DuVail, Interim Evaluation Report, 1/83, pages 15-21).

Tables on the following pages present preliminary statistical analyses of SHAL 1981-82 year-end data on the CAT with City-wide and National Norm scores (Aggregate data.) This is a "one-shot" comp rison to a norm and does not compare a beginning school-year (Fall) score with the appropriate year-end (Spring) score.

Table 6 presents data for SHAL schools by grades; Table 7 presents comparable data for City-wide results. Table 6 shows 19 comparisons for each of the 3 SHAL elementary schools (total of 57) and Table 7 shows the 19 comparisons for comparable test results city-wide; there are 12 comparisons for Stowe middle school in Table 6 and the comparable 12 comparisons for city-wide data in Table 7. In comparing data from the two tables, we can draw the following generalizations.

1. There are 69 total test results for the four SHAL schools and 31 for the city-wide results.

2. The SHAL results produced 35 means that were not statistically (.05) different from the national means; 8 that were greater and 26 that were less. Thus, on 43 of 69 (62 percent) SHAL schools attained or exceeded the statistical national mean. On 16 of 69 (23 percent) SHAL schools exceeded the numerical mean.

3. The city-wide results produced 2 means that were not statistically different from the national means; 2 that were greater and 27 that were less. On 4 of 31 (13 percent), St. Louis City attained or exceeded the statistical national mean. On 3 of 31 (9.7 percent) city schools (including SHAL) exceeded the numerical mean.

4. Comparisons of the two columns of raw score means and the size of the Z statistic show that SHAL schools are closer to the national mean than City-wide results in almost every case. (Example: City-wide Reading 1 is 34.7; it is 37.6, 39.2 and 35.8 for the SHAL schools and 40.0 for the National. Each SHAL school is closer to the National Norm than the City-wide result). One of the few exceptions to this generalization is the Stowe Language 8, but this result is not below the statistical average.

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*Compiled by Dr. James R. Leonard, Midwest Race and Sex Desegregation Assistance Center, Kansas State University. The Midwest Center provided Technical Assistance in Training, Implementation and Evaluation for SHAL.

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TABLE 6

Z-TEST COMPARISONS BETWEEN PROJECT SHAL SCHOOLS 1981-1982
END OF YEAR CALIFORNIA ACHIEVEMENT TEST RAW SCORES
FOR TOTAL READING, LANGUAGE, MATHEMATICS AND BATTERY:
SECOND YEAR COMPARISONS BETWEEN PROJECT SCHOOLS AND THE NATIONAL NORMS

SCHOOL	GRADE LEVEL	TEST SECTION: TOTAL	SCHOOL RAW SCORE MEAN	NATIONAL RAW SCORE MEAN	NATIONAL STANDARD DEVIATION	GRADE LEVEL SIZE	Z -STATISTIC $\alpha^* = \alpha > .05$ SIGN = DIRECTION
Arlington	1	Reading	37.6	40.0	12.74	53	-1.37
Arlington	1	Mathematics	38.2	40.2	10.05	53	-1.45
Arlington	1	Battery	88.7	94.8	25.03	53	-1.77
Arlington	2	Reading	37.6	51.1	15.86	52	-6.14*
Arlington	2	Language	25.2	30.4	7.33	52	-5.12*
Arlington	2	Mathematics	42.4	47.4	12.82	52	-2.81*
Arlington	2	Battery	112.8	146.3	34.93	52	-6.92*
Arlington	3	Reading	44.2	55.5	14.74	56	-5.74*
Arlington	3	Language	26.3	33.7	8.57	56	-6.46*
Arlington	3	Mathematics	49.6	55.9	18.31	56	-2.57*
Arlington	3	Battery	135.9	161.6	40.83	56	-4.71*
Arlington	4	Reading	35.5	44.1	17.28	56	-3.72*
Arlington	4	Language	36.7	41.1	12.62	56	-2.61*
Arlington	4	Mathematics	45.2	50.5	17.78	56	-2.23*
Arlington	4	Battery	128.3	149.4	46.43	56	-3.40*
Arlington	5	Reading	40.2	45.0	15.97	58	-2.29*
Arlington	5	Language	41.9	41.5	11.97	58	.25
Arlington	5	Mathematics	50.2	50.5	18.34	58	- .12
Arlington	5	Battery	144.5	150.1	46.70	58	- .91
Hempstead	1	Reading	39.2	40.0	12.74	74	- .54
Hempstead	1	Mathematics	43.6	40.2	10.05	74	2.91[a]
Hempstead	1	Battery	97.0	94.8	25.03	74	.76
Hempstead	2	Reading	42.5	51.1	15.86	80	-4.85*
Hempstead	2	Language	28.4	30.4	7.33	80	-2.44*

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TABLE 6 (CONTINUED)

SCHOOL	GRADE LEVEL	TEST SECTION: TOTAL	SCHOOL RAW SCORE MEAN	NATIONAL RAW SCORE MEAN	NATIONAL STANDARD DEVIATION	GRADE LEVEL SIZE	Z -STATISTIC a_j* $=\alpha >$ .05 SIGN = DIRECTION
Hempstead	2	Mathematics	46.1	47.4	12.82	80	- .91
Hempstead	2	Battery	134.7	146.3	34.93	80	-2.97*
Hempstead	3	Reading	51.2	55.5	14.74	62	-2.29*
Hempstead	3	Language	35.5	33.7	8.57	62	1.65
Hempstead	3	Mathematics	55.3	55.9	18.31	62	- .26
Hempstead	3	Battery	156.6	161.6	40.83	62	- .96
Hempstead	4	Reading	36.2	44.1	17.28	75	-3.96*
Hempstead	4	Language	38.5	41.1	12.62	75	-1.78
Hempstead	4	Mathematics	47.2	50.5	17.78	75	-1.61
Hempstead	4	Battery	135.5	149.4	46.43	75	-2.59*
Hempstead	5	Reading	39.5	45.0	15.97	106	-3.55*
Hempstead	5	Language	40.2	41.5	11.97	106	-1.12
Hempstead	5	Mathematics	48.9	50.5	18.34	106	- .90
Hempstead	5	Battery	140.8	150.1	46.70	106	-2.05*
Laclede	1	Reading	35.8	40.0	12.74	50	-2.33*
Laclede	1	Mathematics	39.3	40.2	10.05	50	- .63
Laclede	1	Battery	90.4	94.8	25.03	50	-1.24
Laclede	2	Reading	47.9	51.1	15.86	77	-1.77
Laclede	2	Language	29.4	30.4	7.33	77	-1.19
Laclede	2	Mathematics	50.3	47.4	12.82	77	1.98[a]
Laclede	2	Battery	144.4	146.3	34.93	77	- .48
Laclede	3	Reading	58.3	55.5	14.74	66	1.54
Laclede	3	Language	37.4	33.7	8.57	66	3.51[a]
Laclede	3	Mathematics	65.2	55.9	18.31	66	4.13[a]

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TABLE 6 (CONTINUED)

SCHOOL	GRADE LEVEL	TEST SECTION: TOTAL	SCHOOL RAW SCORE MEAN	NATIONAL RAW SCORE MEAN	NATIONAL STANDARD DEVIATION	GRADE LEVEL SIZE	Z -STATISTIC a,* = α > .05 SIGN: DIRECTION
Laclede	3	Battery	178.3	161.6	40.83	66	3.32[a]
Laclede	4	Reading	38.3	44.1	17.28	79	-2.98*
Laclede	4	Language	41.3	41.1	12.62	79	.14
Laclede	4	Mathematics	49.9	50.5	17.78	79	- .29
Laclede	4	Battery	143.9	149.4	46.43	79	-1.05
Laclede	5	Reading	42.7	45.0	15.97	65	-1.16
Laclede	5	Language	47.1	41.5	11.97	65	3.77[a]
Laclede	5	Mathematics	59.6	50.5	18.34	65	4.00[a]
Laclede	5	Battery	162.1	150.1	46.70	65	2.07[a]
Stowe	6	Reading	40.4	44.3	15.31	105	-2.61*
Stowe	6	Language	43.6	42.5	11.99	105	.94
Stowe	6	Mathematics	49.8	48.7	17.39	105	.65
Stowe	6	Battery	146.3	148.9	44.36	105	- .60
Stowe	7	Reading	33.8	40.0	16.25	132	-4.38*
Stowe	7	Language	38.3	38.9	11.94	132	- .58
Stowe	7	Mathematics	46.0	43.2	19.14	132	1.68
Stowe	7	Battery	130.4	136.1	47.20	132	-1.39
Stowe	8	Reading	34.1	39.8	15.09	119	-4.12*
Stowe	8	Language	39.7	41.0	11.90	119	-1.19
Stowe	8	Mathematics	49.0	49.4	18.26	119	- .24
Stowe	8	Battery	135.3	142.5	44.51	119	-1.64

SUMMARY: 35 means are not significantly different from the national average.
8 means are greater than the national average.
26 means are less than the national average.

Note: (1) California Achievement Test, Form C, DOES NOT INCLUDE TOTAL LANGUAGE SCORES IN THE FIRST GRADE.
(2) a = α > .05 (Above National Norm)
(3) Two-Tailed Z-Test; Z = 1.96

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TABLE 7

Z-TEST COMPARISONS BETWEEN ST. LOUIS PUBLIC SCHOOL'S 1981-1982 END OF YEAR CALIFORNIA ACHIEVEMENT TEST RAW SCORES FOR TOTAL READING, LANGUAGE, MATHEMATICS AND BATTERY: APRIL, 1982

GRADE LEVEL	TEST SECTION: TOTAL	SCHOOL RAW SCORE MEAN	NATIONAL RAW SCORE MEAN	NATIONAL STANDARD DEVIATION	GRADE LEVEL SIZE	Z -STATISTIC $\alpha_j^* = \alpha / .05$ Step = Direction
1	Reading	34.7	40.0	12.74	5,465	-30.75*
1	Mathematics	37.6	40.2	10.05	5,465	-19.13*
1	Battery	84.8	94.8	25.03	5,465	-29.53*
2	Reading	43.5	51.1	15.86	4,591	-32.47*
2	Language	27.9	30.4	7.33	4,591	-23.11*
2	Mathematics	44.7	47.4	12.82	4,591	-14.27*
2	Battery	131.8	146.3	34.93	4,591	-28.13*
3	Reading	49.6	55.5	14.74	4,387	-26.51*
3	Language	32.4	33.7	8.57	4,387	-10.05*
3	Mathematics	52.6	55.9	18.31	4,387	-11.94*
3	Battery	149.5	161.6	40.83	4,387	-19.63*
4	Reading	38.7	44.1	17.28	4,248	-20.37*
4	Language	39.8	41.1	12.62	4,248	- 6.71*
4	Mathematics	48.1	50.5	17.78	4,248	- 8.79*
4	Battery	139.0	149.4	46.43	4,248	-14.60*
5	Reading	42.5	45.0	15.97	4,295	-10.26*
5	Language	41.6	41.5	11.97	4,295	.55
5	Mathematics	51.4	50.5	18.34	4,295	3.22[a]
5	Battery	148.0	150.1	46.70	4,295	- 2.93*
6	Reading	40.9	44.3	15.31	3,953	-13.96*
6	Language	42.9	42.5	11.99	3,953	2.10[a]
6	Mathematics	47.2	48.7	17.39	3,953	- 5.42*

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TABLE 7 (CONTINUED)

GRADE LEVEL	TEST SECTION: TOTAL	SCHOOL RAW SCORE MEAN	NATIONAL RAW SCORE MEAN	NATIONAL STANDARD DEVIATION	GRADE LEVEL SIZE	Z -STATISTIC $\alpha,* = \alpha > .05$ SIGN = DIRECTION
6	Battery	143.8	148.9	44.36	3,953	- 7.23*
7	Reading	36.5	40.0	16.25	3,898	-13.45*
7	Language	38.3	38.9	11.94	3,898	- 3.14*
7	Mathematics	40.7	43.2	19.14	3,898	- 8.15*
7	Battery	128.3	136.1	47.20	3,898	-10.32*
8	Reading	36.9	39.8	15.09	3,878	-11.97*
8	Language	41.0	41.0	11.90	3,878	0
8	Mathematics	48.0	49.4	18.26	3,878	- 4.77*
8	Battery	138.1	142.5	44.51	3,878	- 6.16*

SUMMARY: 2 means are not statistically different from the national average.
2 means are statistically greater than the national average.
27 means are statistically less than the national average.

Note: (1) $a = \alpha > .05$ (POSITIVE OR ABOVE National Mean)

(2) Two Tailed Z-Test; = 1.96

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Certainly other comparisons are possible between Tables 6 and 7. However, the results clearly show two things: 1) the SHAL schools have a much higher percentage of on-national norm results (62 percent) than does the City (13 percent) and 2) where SHAL schools do not yet attain the national norms, they nevertheless are closer to the national norm than are the City schools as a group.

Number of Grades Compared to National Mean (Statistically)

	Equal to or above on				Below on			
	BAT.	READ.	LANG.	MATH.	BAT.	READ.	LANG.	MATH.
Arl.	2	1	1	2	3	4	3	3
Hemp.	2	1	3	5	3	4	1	0
Lacl.	5	3	4	5	0	2	0	0
Stowe	3	0	3	3	0	3	0	0
TOTAL	12	5	11	15	6	13	4	3

Thus, of 69 comparisons, the areas of greatest success (in decreasing order) are math, total battery, language and reading. Stated another way, reading is the area where there is the greatest need for improvement. (A comparison of improvements by schools is not really appropriate at this time since we cannot show growth without matched data and a baseline from which to show progress).

Cohort Data

Table 8 presents the first attempt at following cohorts of youngsters over time. The data show CAT results for total reading (RTOT) and total math (MTOT) for the Fall to Fall comparisons 1980, 1981, 1982. The SHAL average on the baseline (F80) on reading is higher than city on cohort 3 and lower on the other seven; on math, SHAL is higher on cohort 3 and the same on 7, but is lower on

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TABLE S. SHAL COHORTS OF STUDENTS REMAINING IN SAME SCHOOL* FOR 3 CONSECUTIVE YEARS 1980-81 THROUGH 1982-83

Cohort	Grade Pattern	School	N	F80 RTOT	F81 RTOT	F82 RTOT	F80 MTOT	F81 MTOT	F82 MTOT
1	1, 2, 3	Arlington	22	39.5	33.6	36.5	38.4	27.4	38.2
		Hempstead	19	41.7	38.7	44.0	47.6	38.5	37.4
		Laclede	29	43.0	34.4	40.1	38.7	44.5	49.0
		SHAL Average	70	41.6	35.3	40.0	41.0	37.5	42.5
		City Wide	2125	44.6	36.1	40.2	47.8	40.2	43.7
2.	2, 3, 4	Arlington	23	35.9	38.0	35.7	43.5	41.4	36.0
		Hempstead	21	44.7	40.0	41.0	41.1	42.9	42.9
		Laclede	25	40.7	52.6	45.0	41.6	53.9	46.7
		SHAL Average	69	40.3	43.9	40.7	42.1	46.4	42.0
		City Wide	2335	40.6	40.1	40.6	42.4	44.5	44.0
3	3, 4, 5	Arlington	30	36.2	41.2	39.2	45.0	44.8	46.1
		Hempstead	28	45.8	38.8	41.7	47.6	46.1	48.7
		Laclede	23	48.4	44.6	47.3	61.4	50.3	61.0
		SHAL Average	71	43.9	41.4	42.8	51.3	47.1	52.0
		City Wide	2452	39.0	38.1	43.6	43.3	43.4	48.0
4	4, 5, 6	(1) Arlington*	43	33.8	39.9	41.8	39.2	47.1	47.6
		(1) Hempstead	24	42.6	44.0	45.5	38.5	44.4	45.0
		(1) Laclede	25	35.8	42.8	46.4	45.8	52.7	53.4
		SHAL Average	92	36.6	41.8	44.0	40.8	47.9	48.5
		City Wide	2803	39.3	42.7	44.2	43.0	46.3	48.2
5	5, 6, 7	(1) Arlington	18	37.2	38.3	40.8	35.0	43.8	44.6
		(1) Hempstead	21	45.7	44.3	45.4	49.7	48.6	47.8
		(1) Laclede	22	37.8	41.0	44.4	49.0	59.6	55.8
		SHAL Average	61	40.3	41.3	53.7	45.1	51.2	49.7
		City Wide	2547	42.0	42.3	45.0	45.3	46.5	45.7
6	6, 7, 8	Stowe	83	41.4	43.4	44.7	40.6	41.9	44.9
		City Wide	2508	41.7	44.2	45.3	44.4	44.5	46.1
7	7, 8, 9	Stowe	84	40.9	42.5	41.0	43.9	46.3	44.3
		City Wide	2365	43.0	44.0	45.7	43.9	44.8	45.4
8	8, 9. 10	Stowe	72	43.3	45.6	42.4	44.6	47.1	44.1
		City Wide	1830	45.9	48.0	42.9	47.4	48.7	44.5

(1)* or changing schools to enter 6th grade at Stowe. Data provided by Evaluation office, St. Louis Schools. Raw Scores.

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the remaining six cohorts. In summary, this shows that SHAL was lower than the city on 13 or 16 (and one even) comparisons on baseline (lower on 81 percent). The SHAL average shows higher results on 12 comparisons of 32 with the City average on 1981 and 1982 or 20 of 32 lower (lower on 62.5 percent). The SHAL average is visibly influenced by the low scores at one elementary school and in the single comparison at Stowe Middle School. On cohort #8, pupils had only one year of SHAL treatment. The best results for SHAL appear in cohorts 2, 3, 4 and 5. Other ways to look at cohort data include determining if there is an absolute gain or loss from F80 to F82 (RTOT and MTOT) for SHAL. According to Table 8 there are 11 gains and 5 losses for SHAL of 16 combinations. For City data there are 10 gains and 5 losses (one "even") over the same time. In terms of absolute difference between SHAL and City, the gain favors SHAL 11 to 5. (The absolute difference is a comparison between SHAL and City as follows. For cohort 1, SHAL lost 1.6 from F80 RTOT to F82 RTOT; City lost 4.4. The absolute difference between SHAL and City is 2.8. The City lost 2.8 more than SHAL. Since gains are desired, this larger loss for the City would favor SHAL. Absolute differences favor SHAL 69 percent and the City 31 percent.) Thus, without statistical treatment to test the assertation, there seems to be some slight edge to SHAL over the City interms of pupil gains after one full year of SHAL treatment. Subsequent analyses will determine if this trend continues.

Table 9 provides aggregate comparisons of SHAL mean scores for 1981-82 end-of-year CAT (Spring, 1982) with the national norm and with city results (including SHAL schools). Results displayed in this manner show that SHAL schools seem to be doing best in the early grades (1-3). Displayed in this manner the data show that to date highest mean scores have been in Laclede (9 of 19 above national), then Stowe (3 of 12), then Hempstead (3 of 19).

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Table 9

Spring, 1982 Comparisons of SHAL, City and National Means on CAT Reading, Math, and Battery (Numerical Mean Comparison)

Grade/Test		NAT.	CITY	S	H	A	L	SHAL means Ave.	above City (N)
1	Reading	40.0	37.7		39.2	37.6	35.8	37.8*	1
	Math	40.2	37.6		43.6	38.2	39.3	40.8*	3
	Battery	94.8	84.8		97.0	88.7	90.4	92.6*	3
2	Reading	51.1	43.5		42.5	37.6	47.9	43.3	1
	Lang.	30.4	27.9		28.4	25.2	29.4	28.0*	2
	Math	47.4	44.7		46.1	42.4	50.3	46.7*	2
	Battery	146.3	131.8		134.7	112.8	144.4	132.8*	2
3	Reading	55.5	49.6		51.2	44.2	58.3	51.6*	2
	Lang.	33.7	32.4		35.3	26.3	37.4	33.4*	2
	Math	55.9	52.6		55.3	49.6	65.2	57.1*	2
	Battery	161.6	149.5		156.6	135.9	178.3	166.7*	2
4	Reading	44.1	38.7		36.2	35.5	38.3	36.8	0
	Lang.	41.1	39.8		38.5	36.7	41.3	39.1	1
	Math	50.5	48.1		47.2	45.2	49.9	47.7	1
	Battery	149.4	139.0		135.5	128.3	143.9	136.7	1
5	Reading	45.0	42.5		39.5	40.2	42.7	40.6	1
	Lang.	41.5	41.6		40.2	41.9	47.1	42.6*	2
	Math	50.5	51.4		48.9	50.2	59.6	52.3*	1
	Battery	150.1	148.0		140.8	144.5	162.1	147.8	1
	Number Above City				(10)	(3)	(17)		(30 of 57)
6	Reading	44.3	40.9	40.4					0
	Lang.	42.5	42.9	43.6					1
	Math	48.7	47.2	49.8					1
	Battery	148.9	143.8	146.3					1
7	Reading	40.0	36.5	33.8					0
	Lang.	38.9	38.3	38.3					--
	Math	43.2	40.7	46.0					1
	Battery	136.1	128.3	130.4					1
8	Reading	39.8	36.9	34.1					0
	Lang.	41.0	41.0	39.7					0
	Math	49.4	48.0	49.0					1
	Battery	141.5	138.1	135.3					0
				(6)					(6)

* = SHAL Average above City
12 of 19 (SHAL) 63%
[7 of 19 (City) 37%]

L = SHAL means higher than City/ means (in addition to O

O = Means higher than National: City = 3 of 31 (9.7%); SHAL = 16 of 69 (23.2 %). Using Average and grades 6-8, then City = 3 of 31; SHAL = 8 of 31 (26%)

L

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Similar results appear when the number of mean scores higher than the city mean scores are tallied (Laclede, 17 of 19, Stowe, 6 of 12 and one tie; Hempstead, 10 of 19).

Using SHAL average mean scores for grades 1-5 (19 scores) and grades 6-8 (12 scores, or a total of 31 measurement points), SHAL outperforms the city (These city data also include SHAL data) on 12 of 19 for grades 1-5 and 6 of 12 (and one tie) for 6-8, or 18 of 30 (one tie). SHAL exceeds the actual city norm 18 of 30, or 60 percent of the time. Using the national norm as a baselines, SHAL exceeds the actual national norm on 8 of 31 comparisons (26 percent) and city (including SHAL) exceeds the actual national norm on 3 of 31 comparisons (9.7 percent). These results seem to point to a slight edge for SHAL after one year of actual treatment. Additional analyses will determine if these trends continue.

Using preliminary data and first analyses, it seems that SHAL is beginning to move toward the goal of improved pupil performance based on standardized test scores.

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